

PROJECT TITLE : PROTAGORAS
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TOBACCO EXTRACTION

100 g of Mexican Burley strips was extracted with water, acid, KOH and an enzyme solution. The solutions of the different steps were pooled, concentrated and added again to the resulting tobacco. The extraction conditions and the amount of the extracted protein as a % of the original protein content of the tobacco are shown in the table below :

	pH	Liquid	Enzyme (mg/100g tobacco)	Temp	Time (min)	% Protein extracted	Soluble %
Step I	5,9	H ₂ O	-	60	90	25	3,3
Step II	1,9	H ₂ O + acid	-	60	90	12	1,6
Step III	13,3	H ₂ O + KOH	-	60	90	15	0,8
Step IV	12,5	H ₂ O	400	-	180	19	0,8

The highest amount of protein that was extracted was 71% in the liquid phase of the extracted tobacco. Using water, acid, KOH and again water instead of enzyme extraction, only 58% proteins were found in the extract after these steps. By adding again the concentrated liquid phase, the resulting tobacco had nearly the same amount of N-NO₃, N-NH₃, but 15% less protein and N-TA than in untreated tobacco. The tobacco weight changed : it was 20% lower than the initial weight. This was partially due to a loss of tobacco during extraction.

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In a further step, tobacco will be extracted and the liquid phase will be deproteinated and added once again to the resulting tobacco which will be analysed.

REFERENCES

- (1) Mangilli-M.-F., Notebook 80.08.05.
(2) Bindler-G.-N., Notebook 80.08.04.



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